PTO/SB/33 (07-05)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number: 02103-0381001/S16
	Application Number 10/657,496	Filed September 8, 2003
	First Named Inventor Paul T. Bender	
	Art Unit 3657	Examiner Mariano Ong Sy

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record 18,411
(Reg. No.)

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34

/charles hieken/
Signature

Charles Hieken
Typed or printed name

(617) 542-5070
Telephone number

July 8, 2010
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below'.

☐ Total of no. forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Paul T. Bender	Art Unit	: 3657
Serial No.	: 10/657,496	Examiner	: Mariano Ong Sy
Filed	: September 8, 2003	Conf. No.	: 9342
Title	: FAILSAFE OPERATION OF ACTIVE VEHICLE SUSPENSION		

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF

The Final Action states:

5. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Patil at al. (US 5,070,284).

> Patil et at. disclosed an active vehicle suspension system with fail-safe operation comprising: an actuator 100 with an armature and a stator, the stator having at least one coil with coil ends, power electronics connected to the coil ends to deliver power to the actuator through the coil ends, and a fail-safe clamping circuit 118, 120, 138 connected to the coil ends powered by energy produced from the movement of the actuator that is directly conveyed to the clamping circuit from the coil ends, to passively damp the actuator during a failure of the power electronics by clamping the coil ends together through relay 120; wherein when the machine 104 is operated as an alternator in the fail-safe mode, electric currents are generated by the rotation of the armature via the screw threads 112 and the screw cage 106, and the generation of electric currents will definitely generate a back electromotive force which powers the clamping circuit through the coil assembly. P.3.

This ground of rejection is respectfully traversed. We rely on the authorities set forth on pages 2-5 of the Response filed 29 April 2009 and the proper construction of claim 1 set forth on ages 5-6. The invention disclosed and claimed in this application uses power generated by the actuator during failure of the power supply that is for providing power to the actuator to close the normally open switch by clamping the coil ends together. The reference discloses using mechanical relays with normally closed contacts connecting to a defined load when the suspension system fails.

The power the invention needs to hold the switch closed is analogous to the power provided by the "suspension enabled" line of the reference. The difference is that in the reference, normally closed relays are used. That is to say, no power is required in order to hold the relays closed; that is their normal state. Power is required to hold them open. The reference

describes the relay as having normally closed and normally open contacts; however, it can be seen that the normally closed contacts are the ones that connect a fail safe load in the event of a failure in the system. If there was a failure, power to operate the electronics may not be available, and using the normally closed contacts ensures that the leads get clamped, and the fail-safe damping resistors are used when the failure occurs. The reference does not describe where the suspension enable signal power comes from. The reference clearly fails to disclose that it is provided by movement of the actuator as disclosed and claimed in this application.

The invention disclosed and claimed in this application obtains power for closing a normally open switch from the movement of the actuator directly. The power to hold the switch closed is different from the power that flows through the switch when the switch is closed.

The reference fails to disclose "fail-safe clamping circuit connected to coil ends powered by energy produced from movement of the actuator that is directly conveyed to the clamping circuit from the coil ends to passively damp the actuator during a failure of the power electronics by clamping the coil ends together" as called for by the claims. The reference therefore does not anticipate the rejected claims. If this ground of rejection is maintained, the Examiner is respectfully requested to quote verbatim the language in the reference regarded as corresponding to this limitation in the claims.

Claims 3-5, 7-9 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patil as a primary reference in view of Murty as a secondary reference. We have shown above that the primary reference does not anticipate claims 1 and 6 upon which claims 3-5 and 7-9 and 11 depend. It is therefore impossible to combine the references to meet the limitations of these claims. We rely on the authorities set forth on pages 8 and 9 of the response filed 29 April 2009. That it is impossible to combine the references to meet the rejection of these claims is reason enough for withdrawing the rejection of them. If this ground of rejection is maintained, the Examiner is respectfully requested to quote verbatim the language in the references regarded as corresponding to each limitation these claims.

Moreover, claim 4 positively recites the clamping circuit comprising a solid-state device. Solid state switches are especially advantageous when used in a vehicle suspension because as explained in the specification "mechanical relays are prone to failures when subjected to the vibration and temperature extremes found in a vehicle suspension." A problem is that normally

closed solid state switches in higher power configurations necessary for this application do not exist. Only normally open high power solid state switches presently exist. In order to close the normally open solid state switch, power must be applied (and maintained) to the control terminal of the switch. This power is different from (although it is derived from) the power that flows through the switch and through the actuator coils to provide damping.

In view of the foregoing reasoning and authorities of record, and the inability of the prior art, alone or in combination, to anticipate, suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, the claims are submitted to be in a condition for allowance, and the decision finally rejecting them should be reversed.

Please apply any charges or credits to Deposit Account No. 06-1050, order no. 02103-0381001/S16.

Respectfully submitted,
FISH & RICHARDSON P.C.

Date: 8 July 2010

/charles hieken/

Charles Hieken
Reg. No. 18,411
Attorneys for Application Owner

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (877) 769-7945